VIVEKANANDA VIDYALAYA HIGHER SECONDARY SCHYOOL, ANTHIYUR, ERODE. 12TH CHEMISTRY - 2 & 3 MARKS QUESTIONS VOL - 1 2019 - 2020

Especially For The Slow Learners And Average Students

These Qns Enough to get good marks.

1. METALLURGY

- 1. What are the differences between minerals and ores?
- 2. What is the role of Limestone in the extraction of Iron from its oxide Fe2 O3?
- 3. Which type of ores can be concentrated by froth floatation method? Give two examples for such ores.
- 4. Give the uses of Zinc.
- 5. Give the basic requirement for vapour phase refining.
- 6. Define gravity separation OR Hydraulic washing.
- 7. Write the applications of copper.
- 8. what is ammonia leaching?
- 9. CO is more stable than higher temperature. why?
- 10. Define vapour phase method Zr.
- 11. Write about magnetic separation.
- 12. Write about aluminothermic process.
- 13. Explain cyanide leaching.
- 14. Give the limitations of ellingham diagram.

2. p - Block Elements - I

- 1. write a note on fisher tropsch synthesis.
- 2. Give the uses of Borax
- 3. CO is a reducing agent. justify.
- 4. Give the structure of CO and CO₂?
- 5. give the uses of Silicones.
- 6. Write a note on Zeolites.
- 7. Complete the reaction

 $HCOOH + H_2SO_4 \rightarrow ?$

 $B_2H_6 + CH_3OH \rightarrow ?$

- 8. How Will You Identify borate radical?
- 9. How is borax prepared from

Colemanite?

- 10. Define Allotropism.
- 11. What is the action of heat on boric acid?
- 12. Write the preparation of borazole.
- 13. write about Tecto silicates with example.
- 14. What is catenation? property of carbon

3. p - Block Elements - II

- 1. What is inert pair effect?
- 2. what happens when PCl5 is heated?
- 3. Chalgogens belongs to p-block. Give Reason.
- 4. Gives the uses of helium.
- 5. Gives the uses of sulphuric acid.
- 6. how does ammonia reacts with CuSO₄?
- 7. Complete the reaction
 Nacl + MnO2 + H2SO4 →
 XeO₆⁴⁻ + Mn ²⁺ + H⁺ →
- 8. Discuss the structure of SO₂.
- 9. What type of hybridisation occur in BrF_5 and BrF_3
- 10. Give two equations to illustrate the chemical behavior of phospine.
- 11. draw the structure of the following compounds
- a) Marshall's acid b) dithionic acid
- 12. give the uses of argon.
- 13. how will you prepare chlorine in the laboratory?
- 14. Explain why fluorine always exhibit -1 oxidation state?

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4. Transition and Inner Transition Elements

- 1. What are transition metals? Give four examples.
- 2. What are interstitial compounds?
- 3. Why Gd3+ is colorless?
- 4. What are actinides? Give three examples.
- 5. Which is more stable? Fe3+ or Fe2+ explain.
- 6. Explain why Cr2+ is strongly reducing while Mn3+ is strongly oxidizing.
- 7. Why do zirconium and Hafnium exhibit similar properties?
- 8. Which is stronger reducing agent Cr2+ or Fe2+?
- 9. Write the chromyl chloride test.
- 10. What is the action of heat on K2Cr2O7?
- 11. why do transition elements form complex?
- 12. Write polymerization reaction using Zeigler Natta catalyst.
- 13. Transition metals show high melting point why?
- 14. Which is more stable ? Fe3+ or Fe2+ Explain.

5.Coordination Chemistry

- 1.Any five IUPAC names in the book back question. Coordination Compounds.
- 2.Any five Coordination Compounds name with formula.
- 3. Write the structural formula for the rosy red precipitate of a complex (dimethy glyoxime)
- 4. $[cucl4]^{2-}$ exists while $[cul4]^{2-}$ does not exit why?
- 5. What is linkage isomerism? explain with example.
- 6.Difference between double salts and coordination compounds?
- 7. Short note on Homoleptic and Heteroleptic complex.
- 8.Note on i)Ionisation isomers ii)Stereo isomers.
- 9.Calculate CFSE of low spin complex having t^{5}_{2g} eg⁰ electronic configuration.
- 10. write a note on bridged carbonyls.
- 11. Explain d-d transition with an example.
- 12. write any three postulates of werner's theory.
- 13. Explain hydrate isomers.

6. Solid state

- 1. Define unit cell.
- 2. Give any three characteristics of ionic crystals.
- 3. What are point defects?
- 4. Difference between hexagonal close packing and cubic close packing.
- 5. What is Schottky defect?
- 6. why ionic crystals are hard and brittle.
- 7. Distinguish between tetrahedral and octahedral voids.
- 8. write a note on frenkel defects.
- 9. calculate the number of atoms in fcc unit cell.
- 10. differentiate isotropy from anisotropy
- 11. Draw the structure of Nacl.
- 12. Sketch the Sc, bcc and fcc structure.
- 13. Write the Bragg's equation.
- 14. Define crystal lattice.
- 15. What are molecular solids example.
- 16. Short note on metal excess defect.

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7. Chemical kinetics

- 1. Define half life of a reaction.
- 2. define rate law and rate constant.
- 3. what is meant by zero order reaction?
- 4. Note on pseudo first order reaction.
- 5. write Arrhenius equation and explain the terms.
- 6. what are the factors affecting the reaction rate?
- 7. what is activation energy Ea?
- 8. Calculate the half life period for a zero order reaction.
- 9. express the rate of the reaction in terms of changes in the concentration of NO, O2 and NO2.
- 10. Give three examples of first order reaction.

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" HARD WORK BEATS
TALENT WHEN TALENT
DOSEN'T WORK HARD"